

**REMARKS**

The Official Action mailed December 18, 2008, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on August 28, 2003; December 3, 2004; October 17, 2005; December 9, 2005; April 24, 2006; October 31, 2006; and October 22, 2007.

Claims 3, 5, 8, 13, 18, 23, 28, 33, 36-43, 45, 47-57, 74-80 and 82-87 were pending in the present application. (Box 4 of the Office Action Summary appears to omit claim 18 from the list of pending claims; however, claim 18 is pending and allowed as confirmed at Box 5 of the Office Action Summary and at page 8 of the Official Action.)

The Applicant notes with appreciation the allowance of claims 3, 5, 8, 13, 18, 23, 28, 33 and 74-80 (Box 5, Office Action Summary; page 8, Paper No. 20081215). Claims 36-43, 45 and 47-57 have been canceled without prejudice or disclaimer. Thus, independent claim 82 remains the only claim subject to an outstanding rejection. Claim 82 has been amended to include features that are believed to be allowable. Accordingly, claims 3, 5, 8, 13, 18, 23, 28, 33, 74-80 and 82-87 are now pending in the present application, of which claims 3, 74 and 82 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 82-84 as obvious based on the combination of Embodiments 1 and 2 of U.S. Publication No. 2007/0087492 to Yamanaka. (Although the Official Action refers to "35 U.S.C. 102(e)" and anticipation at page 2, line 13, of the Official Action, in context, it appears that the Official Action intends to set forth an obviousness rejection under 35 U.S.C. § 103.) The Applicant respectfully submits that an obviousness rejection cannot be maintained against independent claim 82 of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of independent claim 82, as amended. Specifically, claim 82 has been amended to recite etching the conductive layer after the selective heating of the semiconductor layer to form a gate electrode over the semiconductor layer. The Applicant respectfully submits that Embodiments 1 and 2 of Yamanaka, either alone or in combination, do not teach or suggest the above-referenced features of the present invention. Additionally, the Applicant notes that similar subject matter has been allowed in the Official Action, which notes the following: “[c]laims 3, 5, 8, 13, 18, 23, 28, 33 and 74-80 are allowed because none of the prior art alone or in combination teaches or suggests the particular subset of the process steps in etching the conductive layer after the selective heating of the first and second semiconductor layers” (page 8, Paper No. 20081215). Therefore, the Applicant respectfully submits that Embodiments 1 and 2 of Yamanaka, either alone or in combination, do not teach or suggest etching the conductive layer after the

selective heating of the semiconductor layer to form a gate electrode over the semiconductor layer.

Since Embodiments 1 and 2 of Yamanaka do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects claims 36-41, 45, 47-53, and 85-87 as obvious based on the combination of Yamanaka and U.S. Publication No. 2001/0049163 to Yamazaki.

Claims 36-41, 45 and 47-53 have been canceled without prejudice or disclaimer; therefore, the above-referenced rejections of these claims are now moot.

Regarding dependent claims 85-87, which depend from claim 82, please incorporate the arguments above with respect to the deficiencies in Embodiments 1 and 2 of Yamanaka. Yamazaki does not cure the deficiencies in Embodiments 1 and 2 of Yamanaka. Although the Official Action asserts that Yamazaki teaches the features of claims 85-87, the Official Action fails to address the specific features of claims 85-87, i.e. “wherein the conductive layer is formed of a metal selected from the group consisting of molybdenum (Mo), tungsten (W), titanium (Ti), and chromium (Cr),” “wherein the conductive layer is formed of a metal nitride selected from the group consisting of titanium nitride (TiN), tantalum nitride (TaN), and tungsten nitride (WN),” and “wherein the conductive layer is formed of one selected from the group consisting of tungsten silicide (WSi<sub>2</sub>), molybdenum silicide (MoSi<sub>2</sub>), titanium silicide (TiSi<sub>2</sub>), tantalum silicide (TaSi<sub>2</sub>), chromium silicide (CrSi<sub>2</sub>), cobalt silicide (CoSi<sub>2</sub>), and platinum silicide (PtSi<sub>2</sub>).” In any event, the Applicant respectfully submits that Embodiments 1 and 2 of Yamanaka and Yamazaki, either alone or in combination, do not teach or suggest etching the conductive layer after the selective heating of the semiconductor layer to form a gate electrode over the semiconductor layer.

Since Embodiments 1 and 2 of Yamanaka and Yamazaki do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be

maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects claims 42, 43 and 54-57 as obvious based on the combination of Yamanaka and Yamazaki. Claims 42, 43 and 54-57 have been canceled without prejudice or disclaimer; therefore, the above-referenced rejections are now moot.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

  
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